

# Psychometric properties of the Turkish version of the eating pathology symptoms inventory (EPSI-T)

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## ABSTRACT

The purpose of this study was to examine the factor structure and psychometric properties of the Turkish version of the Eating Pathology Symptoms Inventory (EPSI-T), and to explore gender differences in eating disorder symptoms. Participants were 473 university students in Türkiye (342 women, 113 men) who completed the EPSI-T, along with the Modified Weight Bias Internalization Scale (WBIS-M), Addiction-like Eating Behaviour Scale (AEBS), Muscularity-Oriented Eating Test (MOET), and Depression Anxiety and Stress Scales (DASS-21). Confirmatory factor analysis supported the original eight-factor, 45-item structure [ $\chi^2(914) = 1994.57$ ,  $\chi^2/df = 2.18$ , CFI = 0.90, RMSEA = 0.05 (0.05–0.06), SRMR = 0.07]. Women scored significantly higher on most subscales, except for Excessive Exercise, Muscle Building, and Negative Attitudes toward Obesity, where men scored higher ( $p < 0.005$ ). Reliability was strong, with Cronbach's  $\alpha$  ranging from 0.72 to 0.90 and McDonald's  $\omega$  from 0.75 to 0.90. Convergent and discriminant validity were also supported. Overall, findings suggest that the EPSI-T is a reliable and valid measure of eating disorder symptoms in Turkish-speaking populations and may facilitate cross-cultural research by providing a tool structurally consistent with the original English version.

## CLINICAL IMPLICATIONS

- Eating disorder assessment, intervention, and treatment mainly focus on Western samples, highlighting the need for research in diverse populations.
- The Turkish EPSI showed acceptable psychometrics with an 8-factor structure fit.
- Further validation of the EPSI in Turkish clinical samples is warranted to ensure its applicability across diverse clinical settings.

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## 1. Introduction

Eating disorders (EDs) are serious mental health conditions associated with significant psychological distress, including depression and anxiety, and are linked to high rates of mortality (Schmidt et al., 2016). Their prevalence ranges from 0.1% to 4.5% globally, with rates among university populations between 8% and 17% (Hoek, 2016; Tavolacci et al., 2015). Access to validated assessment tools is crucial for identifying at-risk individuals, monitoring treatment progress, and facilitating replicable research (Schaefer et al., 2021). While many self-report measures exist, their psychometric properties vary, and some, like the Eating Attitudes Test (EAT) and Eating Disorder Examination Questionnaire (EDE-Q), suffer from inconsistent factor structures (Forbush et al., 2013; Hill et al., 2010). In contrast, the Eating Pathology Symptoms Inventory (EPSI) reliably maintains its 8-factor structure (Forbush et al., 2013; Sahlan et al., 2022; Tang et al., 2015) with one exception (Coniglio et al., 2018), highlighting its cross-country applicability.

Research on EDs has begun to challenge the stereotype that they predominantly affect thin, White, affluent girls in the West (Halbeisen et al., 2022), yet existing assessment tools often fail to capture

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symptoms in non-Western cultures because they are often developed using samples of White, affluent girls from Western populations (Berg et al., 2012; Forbush et al., 2013). While symptom patterns are similar across ethnic groups, their manifestations may differ significantly (Eisenberg et al., 2019). While EDs are more prevalent in industrialized societies that idealize thinness (Qian et al., 2022), research has predominantly focused on populations in the Global North, neglecting rising prevalence in non-Western countries (Qian et al., 2022). Culturally sensitive measures are essential for assessing global prevalence and symptom presentations (Melisse et al., 2020), emphasizing the need for culturally adapted assessment tools.

Türkiye, positioned at the intersection of Eastern and Western cultures, displays characteristics of both and is experiencing ongoing Westernization (Tayfur & Evrensel, 2020). Notably, Türkiye's ED prevalence among university students (1–7.9%) reflects Western trends (Altuğ et al., 2000; Uzun et al., 2006), with higher rates in young women compared to men (Peláez Fernández et al., 2007; Sanlier et al., 2008). However, there are significant discrepancies in prevalence rates among studies, both globally and in Türkiye (Alhaj et al., 2022), often due to differences in definitions and measurements of EDs (Fitzsimmons-Craft et al., 2019). This variability complicates accurate identification of ED levels and the development of effective prevention strategies, indicating the need for robust tools like the EPSI to improve consistency with international findings.

Several questionnaires for measuring EDs in Turkish-speaking populations exist, such as the EDE-Q, the EAT-26, and the Dutch Eating Behaviour Questionnaire (DEBQ) (Bozan et al., 2011; Yucel et al., 2011), but they have limitations. For instance, the exploratory factor analysis of the Turkish adaptation of the EAT-26 indicates that while the three-factor structure is preserved, the content is different (Ergüney-Okumuş & Sertel-Berk, 2020). Furthermore, the binge eating subscale of the EDE-Q shows weaker psychometric properties in a Turkish sample (Yucel et al., 2011).

Considering the limitations of current ED measures in general, and specifically in Türkiye, The EPSI offers strong reliability, making it a valuable assessment tool for EDs (Forbush et al., 2013). This 8-subscale 45-item self-report measure was built based on DSM criteria for eating disorders and was informed by the ED theories in the literature, aiming to bring various symptomatisations and factors into a comprehensive whole that is valid across different populations and demographic characteristics (Coniglio et al., 2018). Hence, EPSI effectively covers a wide range of ED symptoms, and each subscale overlaps with the existing ED theories (e.g. the *cognitive restraint subscale* can be explained by the Dietary Restraint Theory, Polivy & Herman, 1985). EPSI has demonstrated strong psychometric properties in diverse cultural contexts. For instance, the EPSI has been successfully adapted for use in Chinese, Iranian, and Swedish samples (Sahlan et al., 2022; Tang et al., 2015) maintaining its 8-factor structure (Sahlan et al., 2022; Tang et al., 2015). Furthermore, the EPSI was invariant by gender, indicating that the EPSI can be compared across genders (Milfont & Fischer, 2010). Research conducted in the United States and China examining gender differences in EPSI scores revealed that female participants scored higher than male participants across most subscales, with the exception of excessive exercise, muscle building, and negative attitudes toward obesity, where men showed elevated scores (Forbush et al., 2014, 2019; Tang et al., 2015). These results align with established patterns of gender-specific eating pathology commonly documented in these populations.

Given the context, the EPSI could be a valuable tool for studying EDs in Turkish-speaking populations. However, to our knowledge, the EPSI has not yet been adapted for this population. This adaptation would provide several key advantages, such as a culturally sensitive tool for more accurately capturing ED symptoms within the local context, facilitating cross-cultural comparisons, and contributing to the global understanding of these issues. Additionally, a validated Turkish EPSI could support clinicians and researchers in Türkiye by providing a standardised measure for assessment, while also facilitating early detection and guiding tailored interventions for individuals experiencing eating-related difficulties.

### 1.1. The current study

In line with the gap in the literature, the aim of this study was to adapt EPSI for research and applied settings in Türkiye. Four hypotheses were formed based on the research aim:

First, we proposed that the 8-factor pattern of the EPSI would be mirrored in the Turkish version (EPSI-T). Second, we expected that the EPSI subscales would demonstrate strong reliability. Third, we

hypothesised moderate and positive correlations between the EPSI subscales and other well-known risk factors for EDs (e.g. internalised weight stigma) and ED symptom questionnaires (e.g. addiction-like EDs and muscularity-oriented EDs), such as Modified Weight Bias Internalization Scale (WBIS) (Romano et al., 2021), Muscularity-Oriented Eating Test (MOET), and Addiction-like Eating Behaviour Scale (AEBS) (Fauconnier et al., 2020) to demonstrate convergent validity. Given that eating pathology and general psychological distress represent related but distinct constructs, we expected low-to-moderate correlations. This is consistent with testing the validity of the EPSI in other languages (e.g. Germany; Meule et al., 2025). While ED symptoms and psychological stress often co-occur, the constructs measured by the EPSI and DASS-21 are distinct. Finally, we aimed to explore differences in the EPSI subscales based on gender. Given that the investigation of gender differences is exploratory in nature, no specific hypotheses were formulated regarding this aim. However, replicating gender patterns observed in other cultural contexts in the Turkish sample would provide additional evidence for the cross-cultural validity of the EPSI-T while ensuring the instrument can be meaningfully used across gender groups.

## 2. Methods

### 2.1. Participants

Data for this study were drawn from a multi-site global project on food insecurity and eating disorders among university students across four universities in Türkiye. We aimed for a sample size of 300 to balance power and feasibility (Tabachnick & Fidell, 2007), ultimately recruiting 494 students online. After excluding 21 students due to diverse gender identities ( $n=19$ ) or missing responses ( $n=2$ ), the final sample included 473 students. Most identified as Turkish (95.6%) and as cisgender women (72.3%), with an average score of 5.26 ( $SD = 1.62$ ) on the MacArthur Scale of Subjective Social Status (MSSSS), suggesting a slightly above-midpoint perceived social status.

### 2.2. Measures

#### 2.2.1. Demographic Questions

Demographic data were collected through multiple-choice self-report questions on university affiliation, ethnicity, gender, sexual orientation, and native language. The MSSSS was used to assess perceived social standing: participants were shown a 10-rung ladder and asked to select the rung representing their place in society. Scores range from 1 to 10, with higher numbers indicating higher perceived socioeconomic status.

#### 2.2.2. Questionnaires

**2.2.2.1. Eating Pathology Symptoms Inventory (EPSI).** The EPSI is a 45-item measure assessing the presence of ED symptoms across dimensions (Forbush et al., 2013; 2014). Participants are asked to rate each item on a 5-point Likert scale ranging from 0 (Never) to 4 (Very Often), considering the presence of those items in the past four weeks. The items are clustered into eight independent subscales (Body Dissatisfaction, Binge Eating, Cognitive Restraint, Excessive Exercise, Restricting, Purging, Muscle Building, and Negative Attitudes Toward Obesity) instead of a total score. Cronbach's alpha reliability ( $\alpha = 0.84$  to 0.89), internal consistency (mean test-retest reliability  $r=0.73$ ), and convergent and discriminant validity of the EPSI were excellent (Forbush et al., 2013; 2014).

**2.2.2.2. The Modified Weight Bias Internalization Scale (WBIS-M).** The WBIS-M is a self-report measure of internalised societal weight-related stigma (Pearl & Puhl, 2014). This internalised stigma is a known risk factor for EDs and is useful for assessing the convergent validity of EDs (Hunger et al., 2020). The WBIS-M exhibits strong internal consistency and construct validity, correlating well with body image, and EDs. The Turkish version showed a  $\alpha$  of 0.92, test-retest reliability of 0.75 ( $p < 0.001$ ), and factor loadings between 0.61–0.80 (Apay et al., 2017). In this study, McDonald's omega ( $\omega$ ) and  $\alpha$  for the WBIS were 0.96 for the total sample and female students, and 0.95 for male students.

**2.2.2.3. The Addiction-like Eating Behaviour Scale (AEBS).** The AEBS measures eating addiction (Ruddock et al., 2017) and includes a total score and two subscales: Appetite Drive and Dietary Control Practices, both of which demonstrate high internal consistency and test-retest reliability. The total score demonstrates predictive, convergent, and divergent validity, with  $\alpha$  of 0.90 and 0.85 for the subscales. The Turkish version maintained construct validity, with  $\alpha$  and split-half reliabilities above 0.70 (Demir et al., 2021). In this study, the Appetite Drive scale showed good reliability ( $\omega=0.88$ ,  $\alpha=0.88$ ) for the total sample, with similar results for female ( $\omega=0.90$ ,  $\alpha=0.89$ ) and male students ( $\omega=0.86$ ,  $\alpha=0.85$ ). Dietary Control also demonstrated acceptable reliability for the total sample ( $\omega=0.77$ ,  $\alpha=0.77$ ), with similar results observed for female ( $\omega=0.79$ ,  $\alpha=0.79$ ) and male students ( $\omega=0.74$ ,  $\alpha=0.72$ ).

**2.2.2.4. Muscularity-Oriented Eating Test (MOET).** The MOET assesses muscularity-oriented eating behaviours rather than thinness-focused EDs (Murray et al., 2019). It consists of 15 items rated on a 5-point Likert scale. The original study demonstrated a single-factor structure with an internal consistency of around 0.90, a test-retest correlation of 0.75, and both convergent and divergent validity. The Turkish version showed a  $\alpha$  of 0.88 and a test-retest reliability of 0.84 (Caliskan & Alim, 2021). In this study, the MOET demonstrated high reliability, with  $\omega=0.91$  and  $\alpha=0.90$  for the total sample,  $\omega=0.90$  and  $\alpha=0.89$  for female students, and both  $\omega$  and  $\alpha=0.93$  for male students.

**2.2.2.5. The Depression, Anxiety, and Stress Scales (DASS-21).** The DASS-21 is a 21-item self-report measure using a 4-point Likert scale to assess depression, anxiety, and stress experiences over the past week (Henry & Crawford, 2005; Lovibond & Lovibond, 1995). It shows good reliability ( $\alpha=0.82$ – $0.93$ ) and acceptable convergent and divergent validity. The Turkish adaptation yielded  $\alpha$  of 0.81–0.87 and test-retest reliability of 0.61–0.68 (Saricam, 2018). In this study, DASS-21 demonstrated good reliability: total sample ( $\omega=0.92$ , 0.86, 0.85;  $\alpha=0.91$ , 0.86, 0.85 for depression, anxiety, and stress), female students ( $\omega=0.92$ , 0.87, 0.84;  $\alpha=0.91$ , 0.86, 0.84), and male students ( $\omega=0.92$ , 0.83, 0.85;  $\alpha=0.92$ , 0.82, 0.85).

### 2.3. Translation procedure

Permission to translate the EPSI into Turkish was obtained from the developer, Dr. Kelsie Forbush. The first two authors independently translated the instrument, ensuring natural phrasing to reflect the original meaning (van Widenfelt et al., 2005). The translation was piloted in a focus group with university students using a think-aloud technique (Charters, 2003), and minor adjustments were made based on feedback. The last author then back-translated it into English, and the team compared this with the original, making final revisions. The completed version was sent to Dr. Forbush, who provided feedback incorporated into the final EPSI-T.

### 2.4. Data preparation and analyses

Statistical analyses were performed using SPSS 25.0 and R 3.0. Since the EPSI was developed and validated based on a solid theoretical framework and given that the primary aim of this study was to assess whether the original factor structure of the scale was maintained in the Turkish version, Confirmatory Factor Analysis (CFA), rather than Exploratory Factor Analysis (EFA), was deemed appropriate to evaluate the predefined model (Levine, 2005). Thus, the CFA examined whether the English EPSI's factor structure was replicated in the Turkish data (Forbush et al., 2013).

The factorial validity of the eight-factor structure of the EPSI-T was tested using CFA with the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator, as implemented in the lavaan package in R. The WLSMV estimator is recommended for ordinal data and non-normal distributions, as it is based on polychoric correlations among observed categorical indicators. Model fit was assessed using multiple fit indices, including the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Tucker–Lewis Index (TLI), and Standardized Root Mean Square Residual (SRMR). While CFI and TLI values closer to 0.95 indicate good fit (Hu & Bentler, 1999; Yaşlıoğlu & Yaşlıoğlu, 2020), for RMSEA and SRMR, values  $\leq 0.09$  are considered acceptable (Cho et al., 2020; İlhan & Çetin, 2014; MacCallum et al., 1996).

Internal consistencies were assessed using McDonald's omega and Cronbach's alpha. Independent *t*-tests evaluated mean differences on EPSI-T scales between female and male students. Pearson

correlations assessed convergent validity (EPSI-T with WBIS, MOET, and AEBS) and discriminant validity (EPSI-T with DASS-21).

Normality checks showed that Purging (skewness = 2.60, kurtosis = 7.02) and Muscle Building scores (skewness = 2.86, kurtosis = 7.85) deviated from normal distribution (Kim, 2013). A log 10 transformation was applied to these subscales, achieving normality (Purging skewness = 1.37, kurtosis = 0.57; Muscle Building skewness = 1.74, kurtosis = -1.79).

## 2.5. Procedure

Ethical approval for this study was obtained from the Ethics Committee of Middle East Technical University (0264-ODTUIAEK-2023). All participants provided written informed consent prior to taking part in the study. Between September 2023 and April 2024, university students in Türkiye, aged 18 and over, were recruited online through social media ads (Twitter, Instagram, Facebook) and via participant systems at two universities with course credit awarded for participation. Participants accessed an online Qualtrics survey through a provided link, where they gave informed consent and received a debrief at the end.

## 3. Results

### 3.1. Confirmatory factor analysis

The CFA revealed the eight-factor EPSI-T with 45 items demonstrated an acceptable fit to the data [ $\chi^2(917) = 2456.09$ ,  $\chi^2/df = 2.68$ , CFI = 0.97, TLI = 0.97, RMSEA = 0.06 [0.05, 0.06], SRMR = 0.09]. The factor loadings of each item on the latent factors are given in [Supplementary Table 1](#).

### 3.2. Reliability

Cronbach's alpha reliabilities ranged from 0.72 to 0.90 for the EPSI-T subscales (i.e.  $\alpha = 0.90$  for Body Dissatisfaction, 0.91 for Binge Eating, 0.81 for Restricting, 0.72 for Cognitive Restraint, 0.80 for Purging, 0.90 for Negative Attitudes toward Obesity, 0.74 for Muscle Building, and 0.86 for Excessive Exercise). The McDonald's omega reliabilities similarly ranged from 0.75 to 0.90 for the EPSI-T subscales (i.e.  $\omega = 0.90$  for Body Dissatisfaction, 0.91 for Binge Eating, 0.81 for Restricting, 0.74 for Cognitive Restraint, 0.82 for Purging, 0.90 for Negative Attitudes toward Obesity, 0.77 for Muscle Building, and 0.86 for Excessive Exercise).

### 3.3. Convergent and discriminant validity

Bivariate correlations of the EPSI-T scales with the WBIS, MOET, AEBS and DASS-21 scales of depression, anxiety, and stress are shown in [Table 1](#).

Correlations between weight bias internalization and EPSI-T scales ranged from small to large for the total sample, with the Restricting subscale showing a nonsignificant association and Body Dissatisfaction exhibiting the largest for total sample. Fisher's z-test indicated that female participants had significantly stronger correlations with Binge Eating ( $z = 2.98$ ,  $p = 0.002$ ) and Purging ( $z = 2.08$ ,  $p = 0.04$ ) than males.

Positive associations were also found between muscularity-oriented eating and EPSI-T scales, with Cognitive Restraint exhibiting the strongest correlations. Among females, the correlation between muscularity-oriented eating and Purging was stronger than among males ( $z = 2.30$ ,  $p = 0.021$ ). Small-to-large correlations were noted between EPSI-T scales and AEBS Appetite Drive, while small-to-moderate correlations were observed with AEBS Dietary Control.

Gender differences emerged in the correlations between Dietary Control and EPSI-T scales, with females showing a significant positive relationship with Body Dissatisfaction and Binge Eating and a negative relationship with Cognitive Restraint and Muscle Building, while males showed a significant positive correlation with Restricting.

Finally, the correlations between the EPSI-T scales and depression, anxiety, and stress tended to be somewhat lower than those between the EPSI-T scales and some—not all—measures of convergent validity, indicating partial evidence for discriminant validity.

**Table 1.** Correlations between the Eating Pathology Symptoms Inventory (EPSI) scales and study variables among female and male students.

All (n = 473)	Body dissatisfaction	Binge eating	Restricting	Cognitive restraint	Purging	Negative attitudes toward obesity	Muscle building	Excessive exercise
WBIS	0.76***	0.49***	0.07	0.38***	0.52***	0.17***	0.15**	0.27***
MOET	0.41***	0.39***	0.09	0.63***	0.50***	0.30***	0.42***	0.51***
AEBS_Appetitive Drive	0.53***	0.77***	-0.24***	0.22***	0.34***	0.17**	0.12*	0.26***
AEBS_Dietary Control	0.29***	0.34***	0.06	-0.27***	0.09*	-0.06	-0.13**	-0.08
Depression	0.50***	0.34***	0.26***	0.09*	0.37***	0.12**	0.09*	0.13**
Anxiety	0.49***	0.40***	0.27***	0.09*	0.46***	0.08	0.07	0.15**
Stress	0.51***	0.35***	0.28***	0.12**	0.42***	0.16**	0.04	0.15**
Female (n = 342)	Body Dissatisfaction	Binge Eating	Restricting	Cognitive Restraint	Purging	Negative Attitudes toward Obesity	Muscle Building	Excessive Exercise
WBIS	0.75***	0.55***	-0.02	0.39***	0.54***	0.24**	0.18**	0.35***
MOET	0.44***	0.37***	0.13*	0.65***	0.58***	0.32***	0.39***	0.51***
AEBS_Appetitive Drive	0.57***	0.78***	-0.25***	0.17**	0.39***	0.20***	0.06	0.21***
AEBS_Dietary Control	0.29***	0.40***	-0.00	-0.28***	0.08	-0.03	-0.14*	-0.09
Depression	0.49***	0.40***	0.23***	0.09	0.40***	0.17**	0.11*	0.18**
Anxiety	0.44***	0.45***	0.24***	0.10	0.47***	0.22***	0.19**	0.30***
Stress	0.45***	0.38***	0.26***	0.13*	0.43***	0.26***	0.12*	0.26***
Male (n = 113)	Body Dissatisfaction	Binge Eating	Restricting	Cognitive Restraint	Purging	Negative Attitudes toward Obesity	Muscle Building	Excessive Exercise
WBIS	0.75***	0.30***	0.24**	0.36***	0.37***	0.25**	0.32***	0.33**
MOET	0.44***	0.47***	0.04	0.62***	0.40***	0.27**	0.50***	0.54***
AEBS_Appetitive Drive	0.47***	0.76***	-0.20*	0.32**	0.20*	0.14	0.24**	0.43***
AEBS_Dietary Control	0.26**	0.12	0.18*	-0.25***	0.07	-0.04	-0.09	-0.03
Depression	0.60***	0.21*	0.32***	-0.09	0.29**	0.10	0.11	0.12
Anxiety	0.53***	0.23**	0.30**	0.04	0.27**	0.08	0.13	0.09
Stress	0.60***	0.25**	0.25**	0.10	0.30**	0.20*	0.09	0.14

WBIS=Weight Bias Internalization Scale, MOET=Muscularity-Oriented Eating Test, AEBS=Addiction-like Eating Behaviour Scale.

### 3.4. Gender differences in scale scores

Female participants exhibited significantly higher EPSI-T scores than male participants in Body Dissatisfaction, Binge Eating, Restricting, and Purging; whereas male participants demonstrated significantly higher scores than female participants in Negative Attitudes toward Obesity, Muscle Building, and Excessive Exercise (see Table 2). However, there was no significant difference on Cognitive Restraint between female and male participants (see Table 2).

## 4. Discussion

To our knowledge, this is the first study to examine the factor structure and psychometric properties of the EPSI in Turkish students. The EPSI-T confirmed that the original 8-factor structure of the 45-item EPSI fit the Turkish sample well. It demonstrated robust psychometric properties, including satisfactory reliability and both convergent and discriminant validity, thereby supporting our hypothesis.

In line with the previous studies in the USA (Coniglio et al., 2018; Forbush et al., 2014), China (Tang et al., 2015), and Iran (Sahlan et al., 2022) results support the eight-factor structure of the EPSI-T with high internal consistencies throughout its subscales. The EPSI-T appears to have adequate psychometric properties and is therefore an appropriate self-report measure for monitoring EDs in Turkish research, promising for clinical use.

Consistent with previous research in the USA, male students in Türkiye showed higher scores in Negative Attitudes toward Obesity, Muscle Building, and Excessive Exercise. However, Farsi and Chinese-speaking men demonstrated higher scores only in Excessive Exercise and Muscle Building than

**Table 2.** Correlations and descriptive statistics of the Eating Pathology Symptoms Inventory Scales for female and male students.

	1	2	3	4	5	6	7	8	Female			Male			<i>t</i>
									<i>M</i>	<i>SD</i>	$\alpha$	<i>M</i>	<i>SD</i>	$\alpha$	
1. Body Dissatisfaction	–	0.60***	0.00	0.35***	0.46***	0.23**	0.14*	0.32***	12.93	7.50	0.90	8.95	6.70	0.88	5.31***
2. Binge Eating	0.40***	–	–0.10	0.28***	0.46***	0.25***	0.12*	0.34***	11.87	7.44	0.91	10.31	7.13	0.89	2.06*
3. Restricting	0.21*	–0.03	–	0.06	0.03	0.04	0.15**	0.11*	6.84	4.45	0.81	5.46	4.55	0.79	3.01**
4. Cognitive Restraint	0.31***	0.37***	0.06	–	0.44***	0.29***	0.22***	0.51***	4.50	2.77	0.72	4.28	3.01	0.74	0.75
5. Purging	0.45***	0.31**	0.27**	0.32***	–	0.30***	0.32***	0.49***	1.77	3.17	0.76	0.08	2.69	0.91	5.03***
6. Negative Attitudes toward Obesity	0.29**	0.18*	0.10	0.27**	0.13	–	0.16**	0.33***	4.50	4.53	0.88	8.59	6.01	0.90	–7.05***
7. Muscle Building	0.29***	0.32***	0.07	0.53***	0.40***	0.42***	–	0.48***	0.63	1.77	0.59	2.70	4.21	0.80	–5.78***
8. Excessive Exercise	0.31***	0.45***	–0.05	0.53***	0.24**	0.44***	0.63***	–	3.91	3.92	0.82	6.92	5.53	0.88	–5.71***

Note: Correlation coefficients displayed above the diagonal are for females and below for males. *M* = Mean, *SD* = Standard Deviation,  $\alpha$  = Cronbach's alpha.

women. Similar to gender norms in the USA (Forbush et al., 2013), Turkish female students also exhibited higher scores in Body Dissatisfaction, Binge Eating, Restricting, and Purging, except for Cognitive Restraint, showed no significant differences. In line with this, a recent study with university students in Türkiye suggested that there were no differences in restrictive eating between male and female students (Akdevelioğlu & Yörüsün, 2019). Overall, the results regarding gender differences in the Turkish version are more similar to those in the USA than in the Chinese (Tang et al., 2015) or Farsi (Sahlan et al., 2022) versions. While direct comparison of mean EPSI-T scores with US normative data would strengthen this interpretation, such data are not currently available for comparison. Future research should prioritize collecting comparative normative data across cultural contexts to better understand cross-cultural similarities and differences in eating pathology presentations. These preliminary findings suggest a potential convergence towards Western norms in eating attitudes and behaviours, with the Turkish sample showing similar gender difference patterns to the USA sample. Although both China and Iran are exposed to Western appearance ideals (Suleymani, 2020), the process of internalising these ideals may be more relevant and immediate to Türkiye due to its proximity to Western countries. However, such differences may also stem from specific methodological aspects in this study (e.g. sample, the type of analysis used). To investigate potential cultural variations between the mentioned countries regarding how Western appearance ideals and pressures are perceived and internalised, comparable samples from each country should be used to measure the same variables.

The results of this study supported the convergent validity of the EPSI-T, as it was found to be positively correlated with WOET and AEBS. Similarly, consistently with previous research, weight bias internalisation was found to be associated with EPSI-T scales, with Muscle Building showing the smallest association and Body Dissatisfaction showing the largest (Romano et al., 2021). Our results support previous studies suggesting that weight bias internalisation exhibits robust positive associations with body dissatisfaction (Pearl & Puhl, 2014). In terms of muscularity-oriented eating and EPSI-T scales, consistent with previous research among university students in Australia, cognitive restraint exhibited the strongest correlation, while restriction showed the smallest correlation with muscularity-oriented eating (Cunningham et al., 2022). In addition, significant positive correlations were found between the EPSI-T scales and AEBS measures (e.g. appetite drive). In line with the previous research, discriminant validity was demonstrated through a significant correlation between the EPSI-T scale and anxiety and depression, providing further support for the validity of the EPSI-T (Gilmartin et al., 2023). Our findings indicate that Body Dissatisfaction and Binge Eating showed relatively higher correlations with general psychopathology compared to other EPSI subscales. In contrast, the remaining EPSI subscales demonstrated low correlations with general psychopathology, supporting their discriminant validity. Overall, these results suggest that while most EPSI domains adequately capture eating-specific pathology, some overlap with broader psychological distress may occur, which is consistent with prior literature discussing the discriminant validity of ED measures in general (Forbush et al., 2013; Meule et al., 2025).

This is the first study to validate the EPSI for the Turkish-speaking population. Our sample, drawn from four large universities in Türkiye, primarily included students from these cities, limiting the generalizability of our psychometric findings to other populations, such as adolescents, clinical samples, or students in smaller cities. However, these universities are large in their capacities and have students coming from a variety of places in Türkiye. Additionally, some gender groups had insufficient participants to evaluate measurement invariance of the EPSI-T, and research suggests that small samples may lead to over-rejection of correct models (Putnick & Bornstein, 2016). In addition, students with diverse gender identities were not included in the psychometric analyses due to the very small sample size ( $n=19$ ). Future research should aim to include gender-diverse participants to ensure the validity and generalizability of the EPSI-T across all gender groups. An administrative error resulted in the exclusion of participants' ages, preventing assessment of age effects on the results; future studies should address this. Future research should prioritize investigating the EPSI-T's psychometric properties in clinical populations, including factorial invariance between clinical and population-based samples.

## 5. Conclusion

Overall, the EPSI-T may contribute to improved assessment and understanding of EDs in Turkish populations. Since the EPSI-T's structure mirrors the original English version, we believe that the EPSI-T could be a valuable tool for studying EDs across different cultures. Given that the literature on EDs is predominantly based on Western cultures, we believe this paper enhances sample diversity by including data from non-Western cultures, thereby providing a more nuanced global understanding of EDs.

## Ethical approval statement

Ethical approval for this study was obtained from the Ethics Committee of Middle East Technical University (Approval No: 0264-ODTUIAEK-2023).

## Author contributions

Conceptualization: FT,PA,NA; Methodology: FT,PA,NA; Formal Analysis: PA, FT; Investigation: FT,PA,GK, NA; Resources: FT, PA, NA; Data curation: PA, FT; Writing- Original Draft: FT,PA,GK, NA; Writing - Review & Editing: FT,PA,GK, NA; Visualisation: PA; Project administration: FT.

## Consent statement

All participants provided written informed consent prior to taking part in the study.

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## Data availability

The data that support the findings of this study are not publicly available due to ethical restrictions. Specifically, the authors do not have permission to share the data, as participants were assured that their responses would remain confidential and would not be shared beyond the research team.

## References

- Akdevelioğlu, Y., & Yörüsün, T. Ö. (2019). Üniversite öğrencilerinin yeme tutum ve davranışlarına ilişkin bazı faktörlerin incelenmesi. *Gazi Sağlık Bilimleri Dergisi*, 4(1), 19–28. <https://dergipark.org.tr/tr/pub/gsbdergi/issue/46054/579500>
- Alhaj, O. A., Fekih-Romdhane, F., Sweidan, D. H., Saif, Z., Khudhair, M. F., Ghazzawi, H., Nadar, M. S., Alhajeri, S. S., Levine, M. P., & Jahrami, H. (2022). The prevalence and risk factors of screen-based disordered eating among university students: A global systematic review, meta-analysis, and meta-regression. *Eating and Weight Disorders: EWD*, 27(8), 3215–3243. <https://doi.org/10.1007/s40519-022-01452-0>
- Altuğ, A., Elal, G., Slade, P., & Tekcan, A. (2000). The Eating Attitudes Test (EAT) in Turkish university students: Relationship with sociodemographic, social and individual variables. *Eating and Weight Disorders: EWD*, 5(3), 152–160.
- Apay, S. E., Yılmaz, E., Aksoy, M., & Akalın, H. (2017). Validity and reliability study of modified weight bias internalization scale in Turkish. *International Journal of Caring Sciences*, 10(3), 1341–1347.
- Berg, K. C., Stiles-Shields, E. C., Swanson, S. A., Peterson, C. B., Lebow, J., & Le Grange, D. (2012). Diagnostic concordance of the interview and questionnaire versions of the eating disorder examination. *The International Journal of Eating Disorders*, 45(7), 850–855. <https://doi.org/10.1002/eat.20948>
- Bozan, N., Bas, M., & Asci, F. H. (2011). Psychometric properties of Turkish version of Dutch Eating Behaviour Questionnaire (DEBQ). A preliminary results. *Appetite*, 56(3), 564–566. <https://doi.org/10.1016/j.appet.2011.01.025>
- Caliskan, G., & Alim, N. E. (2021). Validity and reliability of the Muscularity Oriented Eating Test (MOET) in Turkish. *American Journal of Health Behavior*, 45(5), 856–866. <https://doi.org/10.5993/AJHB.45.5.6>
- Charters, E. (2003). The use of think-aloud methods in qualitative research an introduction to think-aloud methods. *Brock Education Journal*, 12(2), 68–82. <https://doi.org/10.26522/brocked.v12i2.38>
- Cho, G., Hwang, H., Sarstedt, M., & Ringle, C. M. (2020). Cutoff criteria for overall model fit indexes in generalized structured component analysis. *Journal of Marketing Analytics*, 8(4), 189–202. <https://doi.org/10.1057/s41270-020-00089-1>
- Coniglio, K. A., Becker, K. R., Tabri, N., Keshishian, A. C., Miller, J. D., Eddy, K. T., & Thomas, J. J. (2018). Factorial integrity and validation of the Eating Pathology Symptoms Inventory (EPSI). *Eating Behaviors*, 31, 1–7. <https://doi.org/10.1016/j.eatbeh.2018.07.004>
- Cunningham, M. L., Pinkus, R. T., Lavender, J. M., Rodgers, R. F., Mitchison, D., Trompeter, N., Ganson, K. T., Nagata, J. M., Szabo, M., Murray, S. B., & Griffiths, S. (2022). The 'not-so-healthy' appearance pursuit? Disentangling unique associations of female drive for toned muscularity with disordered eating and compulsive exercise. *Body Image*, 42, 276–286. <https://doi.org/10.1016/j.bodyim.2022.06.002>
- Demir, D., Bektas, M., Demir, S., & Bektas, I. (2021). Psychometric properties of the Turkish version of the Addiction-like Eating Behavior Scale for university students. *Current Psychology*, 40(6), 2590–2598. <https://doi.org/10.1007/s12144-020-00664-w>

- Eisenberg, M. E., Puhl, R., Areba, E. M., & Neumark-Sztainer, D. (2019). Family weight teasing, ethnicity and acculturation: Associations with well-being among Latinx, Hmong, and Somali Adolescents. *Journal of Psychosomatic Research*, 122, 88–93. <https://doi.org/10.1016/j.jpsychores.2019.04.007>
- Ergüney-Okumuş, F. E., & Sertel-Berk, H. Ö. (2020). Yeme Tutum Testi Kısa Formunun (YTT-26) Üniversite Örnekleminde Türkçeye Uyarlanması ve Psikometrik Özelliklerinin Değerlendirilmesi [The Psychometric Properties of the Eating Attitudes Test Short Form (EAT-26) in a College Sample]. *Psikoloji Çalışmaları / Studies in Psychology*, 40(1), 57–78. <https://doi.org/10.26650/SP2019-0039>
- Fauconnier, M., Rousselet, M., Brunault, P., Thiabaud, E., Lambert, S., Rocher, B., Challet-Bouju, G., & Grall-Bronnec, M. (2020). Food addiction among female patients seeking treatment for an eating disorder: Prevalence and associated factors. *Nutrients*, 12(6), 1897. <https://doi.org/10.3390/nu12061897>
- Fitzsimmons-Craft, E. E., Karam, A. M., Monterubio, G. E., Taylor, C. B., & Wilfley, D. E. (2019). Screening for eating disorders on college campuses: A review of the recent literature. *Current Psychiatry Reports*, 21(10), 101. <https://doi.org/10.1007/s11920-019-1093-1>
- Forbush, K. T., Wildes, J. E., & Hunt, T. K. (2014). Gender norms, psychometric properties, and validity for the Eating Pathology Symptoms Inventory. *The International Journal of Eating Disorders*, 47(1), 85–91. <https://doi.org/10.1002/eat.22180>
- Forbush, K. T., Wildes, J. E., Pollack, L. O., Dunbar, D., Luo, J., Patterson, K., Petruzzi, L., Pollpeter, M., Miller, H., Stone, A., Bright, A., & Watson, D. (2013). Development and validation of the Eating Pathology Symptoms Inventory (EPSI). *Psychological Assessment*, 25(3), 859–878. <https://doi.org/10.1037/a0032639>
- Forbush, K. T., Hilderbrand, L. A., Bohrer, B. K., & Chapa, D. A. (2019). Test–retest reliability of common measures of eating disorder symptoms in men versus women. *Assessment*, 26(3), 419–431. <https://doi.org/10.1177/1073191117700267>
- Gilmartin, T., Gurchich, C., Dipnall, J. F., & Sharp, G. (2023). One size does not fit all: Exploring how the five-factor model facets predict disordered eating behaviours among adolescent and young adult males and females. *British Journal of Psychology (London, England: 1953)*, 114(1), 132–158. <https://doi.org/10.1111/bjop.12601>
- Halbeisen, G., Brandt, G., & Paslakis, G. (2022). A plea for diversity in eating disorders research. *Frontiers in Psychiatry*, 13, 820043. <https://doi.org/10.3389/fpsy.2022.820043>
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *The British Journal of Clinical Psychology*, 44(Pt 2), 227–239. <https://doi.org/10.1348/014466505x29657>
- Hill, L. S., Reid, F., Morgan, J. F., & Lacey, J. H. (2010). SCOFF, the development of an eating disorder screening questionnaire. *The International Journal of Eating Disorders*, 43(4), 344–351. <https://doi.org/10.1002/eat.20679>
- Hoek, H. W. (2016). Review of the worldwide epidemiology of eating disorders. *Current Opinion in Psychiatry*, 29(6), 336–339. <https://doi.org/10.1097/ycp.0000000000000282>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Polivy, J., & Herman, C. P. (1985). Dieting and binging: A causal analysis. *The American Psychologist*, 40(2), 193–201. <https://doi.org/10.1037/0003-066x.40.2.193>
- Hunger, J. M., Dodd, D. R., & Smith, A. R. (2020). Weight discrimination, anticipated weight stigma, and disordered eating. *Eating Behaviors*, 37, 101383. <https://doi.org/10.1016/j.eatbeh.2020.101383>
- Ilhan, M., & Cetin, B. (2014). Comparing the analysis results of the structural equation models (SEM) conducted using LISREL and AMOS. *Journal of Measurement and Evaluation In Education And Psychology-Epod*, 5(2), 26–42.
- Kim, H. Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics*, 38(1), 52–54. <https://doi.org/10.5395/rde.2013.38.1.52>
- Levine, T. R. (2005). Confirmatory factor analysis and scale validation in communication research. *Communication Research Reports*, 22(4), 335–338. <https://doi.org/10.1080/00036810500317730>
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales (DASS)* (2nd ed.). Psychology Foundation Monograph.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130–149. <https://doi.org/10.1037/1082-989X.1.2.130>
- Melisse, B., de Beurs, E., & van Furth, E. F. (2020). Eating disorders in the Arab world: A literature review. *Journal of Eating Disorders*, 8(1), 59. <https://doi.org/10.1186/s40337-020-00336-x>
- Meule, A., Ertl, S., Forbush, K. T., Mindrup, L. M., Ehrental, J. C., & Kolar, D. R. (2025). Psychometric properties of the German version of the Eating Pathology Symptoms Inventory. *Journal of Eating Disorders*, 13(1), 60. <https://doi.org/10.1186/s40337-025-01253-7>
- Milfont, T. L., & Fischer, R. (2010). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of Psychological Research*, 3(1), 111–130. <https://doi.org/10.21500/20112084.857>
- Murray, S. B., Brown, T. A., Blashill, A. J., Compton, E. J., Lavender, J. M., Mitchison, D., Mond, J. M., Keel, P. K., & Nagata, J. M. (2019). The development and validation of the muscularity-oriented eating test: A novel measure of muscularity-oriented disordered eating. *The International Journal of Eating Disorders*, 52(12), 1389–1398. <https://doi.org/10.1002/eat.23144>
- Pearl, R. L., & Puhl, R. M. (2014). Measuring internalized weight attitudes across body weight categories: Validation of the modified weight bias internalization scale. *Body Image*, 11(1), 89–92. <https://doi.org/10.1016/j.bodyim.2013.09.005>

- Peláez Fernández, M. A., Labrador, F. J., & Raich, R. M. (2007). Prevalence of eating disorders among adolescent and young adult scholastic population in the region of Madrid (Spain). *Journal of Psychosomatic Research*, 62(6), 681–690. <https://doi.org/10.1016/j.jpsychores.2006.12.010>
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The State of the art and future directions for psychological research. *Developmental Review: DR*, 41, 71–90. <https://doi.org/10.1016/j.dr.2016.06.004>
- Qian, J., Wu, Y., Liu, F., Zhu, Y., Jin, H., Zhang, H., Wan, Y., Li, C., & Yu, D. (2022). An update on the prevalence of eating disorders in the general population: A systematic review and meta-analysis. *Eating and Weight Disorders: EWD*, 27(2), 415–428. <https://doi.org/10.1007/s40519-021-01162-z>
- Romano, K. A., Heron, K. E., & Henson, J. M. (2021). Examining associations among weight stigma, weight bias internalization, body dissatisfaction, and eating disorder symptoms: Does weight status matter? *Body Image*, 37, 38–49. <https://doi.org/10.1016/j.bodyim.2021.01.006>
- Ruddock, H. K., Christiansen, P., Halford, J. C. G., & Hardman, C. A. (2017). The development and validation of the Addiction-like Eating Behaviour Scale. *International Journal of Obesity (2005)*, 41(11), 1710–1717. <https://doi.org/10.1038/ijo.2017.158>
- Sahlan, R. N., Blomquist, K. K., & Bodell, L. P. (2022). Psychometric properties of the Farsi version of the Eating Pathology Symptoms Inventory (F-EPsi) among Iranian University men and women. *Journal of Eating Disorders*, 10(1), 67. <https://doi.org/10.1186/s40337-022-00587-w>
- Sanlier, N., Yabancı, N., & Alyakut, O. (2008). An evaluation of eating disorders among a group of Turkish university students. *Appetite*, 51(3), 641–645. <https://doi.org/10.1016/j.appet.2008.05.058>
- Sarıcam, H. (2018). The Psychometric Properties of Turkish Version of Depression Anxiety Stress Scale-21 (DASS-21) in Health Control and Clinical Samples.
- Schaefer, L. M., Crosby, R. D., & Machado, P. P. P. (2021). A systematic review of instruments for the assessment of eating disorders among adults. *Current Opinion in Psychiatry*, 34(6), 543–562. <https://doi.org/10.1097/ycp.0000000000000746>
- Schmidt, U., Adan, R., Böhm, I., Campbell, I. C., Dingemans, A., Ehrlich, S., Elzakkars, I., Favaro, A., Giel, K., Harrison, A., Himmerich, H., Hoek, H. W., Herpertz-Dahlmann, B., Kas, M. J., Seitz, J., Smeets, P., Sternheim, L., Tenconi, E., van Elburg, A., van Furth, E., & Zipfel, S. (2016). Eating disorders: The big issue. *The Lancet. Psychiatry*, 3(4), 313–315. [https://doi.org/10.1016/s2215-0366\(16\)00081-x](https://doi.org/10.1016/s2215-0366(16)00081-x)
- Suleymani, S. (2020). Futurities of beauty and the scalpel: Cosmetic surgeries and fatphobia in Iran. *Fat Studies*, 9(3), 204–219. <https://doi.org/10.1080/21604851.2019.1641396>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Allyn & Bacon/Pearson Education.
- Tang, X., Forbush, K. T., & Lui, P. P. (2015). Development and validation of the Chinese-language version of the eating pathology symptoms inventory. *The International Journal of Eating Disorders*, 48(7), 1016–1023. <https://doi.org/10.1002/eat.22423>
- Tavolacci, M. P., Grigioni, S., Richard, L., Meyrignac, G., Déchelotte, P., & Ladner, J. (2015). Eating disorders and associated health risks among university students. *Journal of Nutrition Education and Behavior*, 47(5), 412–420.e411. <https://doi.org/10.1016/j.jneb.2015.06.009>
- Tayfur, S. N., & Evrensel, A. (2020). Investigation of the relationships between eating attitudes, body image and depression among Turkish university students. *Rivista di Psichiatria*, 55(2), 90–97. <https://doi.org/10.1708/3333.33023>
- Uzun, O., Güleç, N., Özşahin, A., Doruk, A., Özdemir, B., & Çalışkan, U. (2006). Screening disordered eating attitudes and eating disorders in a sample of Turkish female college students. *Comprehensive Psychiatry*, 47(2), 123–126. <https://doi.org/10.1016/j.comppsy.2005.05.004>
- van Widenfelt, B. M., Treffers, P. D., de Beurs, E., Siebelink, B. M., & Koudijs, E. (2005). Translation and cross-cultural adaptation of assessment instruments used in psychological research with children and families. *Clinical Child and Family Psychology Review*, 8(2), 135–147. <https://doi.org/10.1007/s10567-005-4752-1>
- Yaşlıoğlu, M., & Toplu Yaşlıoğlu, D. (2020). How and when to use which fit indices? A practical and critical review of the methodology. *Istanbul Management Journal*, (88), 1–20. <https://doi.org/10.26650/imj.2020.88.0001>
- Yucel, B., Polat, A., İkiz, T., Dusgor, B. P., Elif Yavuz, A., & Sertel Berk, O. (2011). The Turkish version of the eating disorder examination questionnaire: Reliability and validity in adolescents. *European Eating Disorders Review: The Journal of the Eating Disorders Association*, 19(6), 509–511. <https://doi.org/10.1002/erv.1104>